

CLAIMS

What is claimed is:

1. A low filament number, multifilament yarn comprising a total denier size comparable to a high denier monofilament yarn such that the finer denier of each individual filament would not
5 irritate a wearer's skin.
2. The yarn according to claim 1, wherein the yarn includes only a few filaments such that the finer denier of each individual filament would not irritate a wearer's skin.
3. The yarn according to claim 1, wherein the yarn is highly resilient and comfortable to a
10 wearer of a garment made from a fabric made from the yarn, particularly around seams where the fabric is cut and edges are sewn to form the garment.
4. The yarn according to claim 1, wherein the yarn further comprises a yarn bundle having a low number of filaments and wherein the yarn is highly resilient, such that the resilience provides for resistance to bending and deformation approximately as for a monofilament yarn.
5. The yarn according to claim 1, wherein the yarn is flat.
- 15 6. The yarn according to claim 1, wherein the yarn is textured.
7. The yarn according to claim 1, wherein the yarn is between about 20 to about 300 denier.
8. The yarn according to claim 1, wherein the yarn is between about 30 to about 150 denier.
9. The yarn according to claim 1, wherein the yarn further includes at least one elastomeric yarn component.
- 20 10. The yarn according to claim 9, wherein the elastomeric yarn component is spandex.
11. The yarn according to claim 9, wherein the elastomeric yarn is capable of functioning as a ground yarn or as a visual effect yarn.

12. The yarn according to claim 9, wherein the elastomeric yarn is between about 20 to about 70 denier.
13. The yarn according to claim 4, wherein individual filaments in the multifilament bundle, each of the individual filaments having a fine denier allows a resulting yarn, fabrics and/or garments including the yarns to be non-irritating to a wearer's skin, even when exposed to cut ends of the yarns.
14. The yarn according to claim 13, wherein the individual filaments have a denier between about 3 and about 10 denier per filament.
15. The yarn according to claim 1, wherein the filaments are twisted or intermingled.
- 10 16. The yarn according to claim 15, wherein the twisting or intermingling helps the yarn to maintain a bundle integrity suitable for forming fabric in weft-knitted and/or warp-knitted fabric.
17. The yarn according to claim 1, wherein the yarn is formed from fibers having at least one synthetic polymer.
18. The yarn according to claim 1, wherein the yarns are thermally heat-settable, synthetic, continuous filaments produced from nylon, polyester, and/or blends or combinations thereof.
- 15 19. The yarn according to claim 1, wherein the yarn is polyester and/or nylon continuous, low filament number, multifilament yarn.
20. The yarn according to claim 1, wherein the yarn includes heat setting properties that allow fabrics made therewith to be heat-molded to a desired form and shape.
- 20 21. The yarn according to claim 1, wherein the yarn is used to form a multilayer weft knit fabric including two discrete knit fabric layers, the yarns being continuous, multifilament, synthetic yarns.

22. The yarn according to claim 1, wherein the yarn is capable of being used to form a fabric, wherein the fabric is a multi-layer, weft knit spacer fabric, a multi-layer, warp knit spacer fabric, a single layer, warp knit fabric, or a single layer, weft knit fabric.
23. A textile product comprising the yarn of claim 1.
- 5 24. The product of claim 23, wherein the textile product is a fabric formed on a single needle bed of a circular or flat weft knitting machine.
25. The product of claim 24, wherein the fabric is a single knit fabric structure in which the multifilament yarn can be used as a ground yarn and/or can provide a visual effect, such as a sheer quality to the fabric.
- 10 26. The product of claim 25, wherein the single knit fabric provides a non-irritating surface for contact with the skin of the wearer of a garment made from the fabric.
- wherein the fabric is a multilayer knit fabric.
27. The product of claim 23, wherein the product is a multilayer knit fabric.
28. The product of claim 27, wherein the multilayer knit fabric is a spacer fabric.
- 15 29. The product of claim 28, wherein the spacer fabric has spacer courses between fabric layers, the spacer courses comprising highly resilient, continuous, low filament number multifilament yarns.
30. The product of claim 29, wherein the spacer course yarns are between about 20 to about 150 denier.
- 20 31. The product of claim 28, wherein the fabric forms a molded breast cup for use in a brassiere garment.

32. The product of claim 29, wherein the highly, or substantially totally, resilient, continuous, low filament number multifilament spacer courses are formed from yarns comprising polyester or nylon yarns.

33. The product of claim 29, wherein the spacer courses are formed from yarn between about 5 40 to about 100 total denier in size.

34. The product of claim 29, wherein the spacer courses are formed from multifilament yarn having between about 3 to about 10 denier per filament.

35. The product of claim 27, wherein the multilayer fabric has two parallel knit fabric layers, at least one of the fabric layers having an integrally knitted decorative Jacquard design. wherein 10 the Jacquard design can use one or more patterns, such as geometric, free-form, floral, abstract, brand logos, and the like, and combinations thereof, on the outer, technical face surface of the fabric layer.

36. The product of claim 35, wherein the other layer can include either a decorative design effect on the outer, technical face surface or a less decorative construction.

15 37. The product of claim 35, wherein the two fabric layers are joined together by a series of knit or laid-in courses utilizing a highly resilient, low filament number, multifilament yarn forming spacer yarns, which secure the two layers together in a spaced apart relationship relative to each other.

38. The product of claim 35, wherein multi-layer fabric is formed from either dial or cylinder 20 needle beds.

39. The product of claim 35, wherein the fabric has two discrete knit fabric layers that are secured in a substantially parallel and spaced apart relationship by a plurality of the resilient

spacer yarns extending between the two fabric layers that secure the two fabric layers in a substantially uniformly spaced apart manner.

40. The product of claim 35, wherein the Jacquard design is formed using a combination of stitches, including knit, miss, and/or tuck stitches.

5 41. The product of claim 35, wherein the other, less decorative fabric layer construction is formed using a combination of stitches including knit, miss, and/or tuck stitches.

42. The product of claim 23, wherein the textile product is a garment.

43. The product of claim 1, wherein the yarn includes heat setting properties that allow products made therewith to be heat-molded to a desired form and shape.

10 44. The product of claim 42, wherein the garment is a brassiere garment having molded breast cups.

45. The product of claim 42, wherein the garment includes clothing, apparel, and/or medical garments.

46. Highly resilient, non-irritating, multifilament yarns usable for forming fabrics capable of
15 being utilized in garments, wherein the yarns provide comfort for the wearer of the garment, such comfort being significantly greater than for garments containing monofilament yarns.

47. The yarns according to claim 46, wherein the yarns are used to form knitted fabrics.

48. The yarns according to claim 47, wherein the knitted fabrics are warp-knitted or weft-knitted.

20 49. The yarns according to claim 48, wherein the knitted fabrics are formed from single or double needle knitted systems.

50. The yarns according to claim 46, wherein the yarns are utilized as spacer yarns in either weft-knit or warp-knit multi-layer fabrics.

51. The yarns according to claim 46, wherein the yarns are capable of producing visual effects such as sheerness for Tricot or Raschel-made patterns in fabrics.

52. A method of making low filament number, multifilament yarn having monofilament-like resilience comprising the steps of:

5 providing individual filaments of synthetic material;

twisting or intermingling the individual filaments to form bundles of filaments;

wherein the bundles form a low filament number, multifilament yarn for use in fabric formation, and wherein the finer denier of each individual filament in the yarn provides a non-irritating surface when the yarn is incorporated in a fabric.

10 53. The method of claim 52, further including the step of texturing the yarn.

54. A method of forming a fabric comprising the steps of:

providing the yarn according to claim 1;

knitting a fabric using the yarn, such that the finer denier of each individual filament in the yarn provides a non-irritating surface in the fabric.

15 55. The method of claim 54, further including the step of thermally setting the fabric in a predetermined shape.

56. The method of claim 55, wherein the shape is a molded cup of a brasserie garment.